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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/462,179	03/10/2000	NICOLANGELO PEDUTO	022701-854	4762

21839 7590 02/28/2003

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EXAMINER

PATTERSON, MARC A

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 02/28/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

A 9-17

**Office Action Summary**

Application No.

09/462,179

Applicant(s)

PEDUTO ET AL.

Examiner

Marc A Patterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 2/13/03.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### **WITHDRAWN REJECTIONS**

1. The 35 U.S.C. 112 second paragraph rejections of Claims 25 – 26, of record on page 2 of the previous Action, are withdrawn.

### **NEW REJECTIONS**

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 12 and 24 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The phrase ‘flexural modulus’ is not discussed in the specification.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1 – 12 and 19 – 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerschbaumer (U.S. Patent No. 5,219,003).

With regard to Claims 1, 4, 11 – 12 and 20, Kerschbaumer discloses a three – layered tube having impact resistance – modified layers; the internal layer consists of polyamide 6, with an added impact resistance modifier which is a polyethylene rubber component (column 2, lines 39 – 47); the first external layer (middle layer; column 3, lines 1 – 40; Table 1), which serves as a barrier layer, comprises Grilon CA6E, an amorphous copolyamide based on caprolactam and laurolactam (a lactam which corresponds to an amino acid having at least 9 carbons), and Grilamid XE3148, an impact resistance modifier (column 3, lines 1 – 40; Table 1).

Kerschbaumer fails to disclose a polyamide impact resistance modifier present at a concentration by weight of between 10 and 50%. However, Kerschbaumer discloses an impact resistance modifier present at a concentration by weight of 1% (the polyamide comprises an impact modifier; column 2, lines 39 – 47). Therefore, the concentration would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of ordinary skill in the art to vary the concentration, since the concentration would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Kerschbaumer. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

With regard to Claims 2 and 23, as stated above, the external layer comprises an impact resistance modifier.

With regard to Claim 3, Kerschbaumer fails to disclose an impact resistance modifier present in the external layer at a concentration by weight of between 5 and 50%. However, as

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stated above, Kerschbaumer discloses an impact resistance modifier present at a concentration by weight of 1%. Therefore, the concentration would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of ordinary skill in the art to vary the concentration, since the concentration would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Kerschbaumer. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

With regard to Claims 5 – 9, 21, and 24 – 26, Kerschbaumer teaches additional layers comprising the composition of the internal and external layers (it is equivalent for the structure to comprise three layers, or more than three layers; column 2, lines 63 – 67). The claimed aspects of the internal intermediate layers and external intermediate layer being ‘arranged alternately in the transverse direction of the structure’ and an intermediate layer being formed by the ‘composition forming the internal layers’ therefore read on Kerschbaumer.

With regard to Claim 19, the composition comprising the internal layer comprises a plasticizer (column 4, lines 43 – 44).

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kerschbaumer (U.S. Patent No. 5,219,003) in view of VanBuskirk et al (U.S. Patent No. 5,357,030).

Kerschbaumer discloses a three – layered tube comprising a polyamide 6 layer as discussed above. Kerschbaumer fails to disclose a polyamide 6 layer which comprises a chain extender which is present at a concentration of 0.05% and 5% by weight of the layer.

VanBuskirk et al teach the addition of a chain extender to polyamide 6 for the purpose of improving the physical characteristics of the polyamide 6 in the making of extruded products (column 1, lines 38 – 59; column 2, lines 58 – 68).

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for the addition of a chain extender to polyamide 6 in Kerschbaumer in order to improve the physical characteristics of the polyamide 6 in the making of extruded products as taught by VanBuskirk et al.

7. Claims 14 – 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerschbaumer (U.S. Patent No. 5,219,003) in view of Princiotta et al (European Patent No. 0646627).

Kerschbaumer discloses a multilayer polyamide tube comprising an impact modifier as discussed above. With regard to Claims 14 – 18, Kerschbaumer fails to disclose an impact modifier which has a glass transition temperature below 0 degrees Celsius, and comprises acid as a functional group, and has a modulus of less than 200 MPa and a melt flow index of between 0.1 and 7 g/10min measured at 190 degrees Celsius under a load of 2.16 kg and is an ultra low density polyethylene.

Princiotta et al. teach an acid – modified ultra low density polyethylene which has a glass transition temperature below 0 degrees Celsius, and comprises acid as a functional group, and has a modulus of less than 200 MPa and a melt flow index of between 0.1 and 7 g/10min measured at 190 degrees Celsius under a load of 2.16 kg which is used as an impact modifier of

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polyamide 6 (page 2, lines 31 – 58) for the purpose manufacturing the polyamides below a temperature of 40 degrees Celsius (page 2, lines 41 – 46).

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for an acid – modified ultra low density polyethylene which has a glass transition temperature below 0 degrees Celsius, and comprises acid as a functional group, and has a modulus of less than 200 MPa and a melt flow index of between 0.1 and 7 g/10min measured at 190 degrees Celsius under a load of 2.16 kg in Kerschbaumer in order to manufacture the polyamides below a temperature of 40 degrees Celsius as taught by Princiotta et al.

#### ANSWERS TO APPLICANT'S ARGUMENTS

8. Applicant's arguments regarding the 35 U.S.C. 112 second paragraph rejections of Claims 25 – 26, 35 U.S.C. 103(a) rejection of Claims 1 – 12 and 19 – 26, as being unpatentable over Kerschbaumer (U.S. Patent No. 5,219,003), 35 U.S.C. 103(a) rejection of Claim 13 as being unpatentable over Kerschbaumer (U.S. Patent No. 5,219,003) in view of VanBuskirk et al (U.S. Patent No. 5,357,030) and 35 U.S.C. 103(a) rejection of Claims 14 – 18 as being unpatentable over Kerschbaumer (U.S. Patent No. 5,219,003) in view of Princiotta et al (European Patent No. 0646627), of record on page 2 of the previous Action, have been considered and have been found to be persuasive. The rejections are therefore withdrawn. The new 35 U.S.C. 103(a) rejection of Claims 1 – 12 and 19 – 26, as being unpatentable over Kerschbaumer (U.S. Patent No. 5,219,003), 35 U.S.C. 103(a) rejection of Claim 13 as being unpatentable over Kerschbaumer

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(U.S. Patent No. 5,219,003) in view of VanBuskirk et al (U.S. Patent No. 5,357,030) and 35 U.S.C. 103(a) rejection of Claims 14 – 18 as being unpatentable over Kerschbaumer (U.S. Patent No. 5,219,003) in view of Princiotta et al (European Patent No. 0646627) above are directed to amended Claims 1 – 26.

Applicant's arguments regarding the 35 U.S.C 112 second paragraph rejection of Claims 12 and 24, of record on page 2 of the previous Action, have been considered but have not been found to be persuasive for the reasons set forth below.

Applicant argues, on page 4, that amended Claims 12 and 24 overcome the rejection. However, the phrase 'flexural modulus' is not discussed in the specification. The 'modulus' is discussed on page 8, but no broader language is used. The amendment therefore constitutes new matter. The new 35 U.S.C. 112 first paragraph rejection of Claims 12 and 24 above is directed to amended Claims 12 and 24.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Patterson, whose telephone number is (703) 305-3537. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Harold




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Pyon, can be reached at (703) 308-4251. FAX communications should be sent to (703) 872-9310. FAXs received after 4 P.M. will not be processed until the following business day.

Marc A. Patterson, PhD.

*Marc Patterson*  
Art Unit 1772

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
*1772* *2/21/03*